the plate in Roberts's collection of photographs, though it is confused with the strongly granular background.

Although these nebulæ are quite conspicuous on the photographs, I found, on examining them with the 36-inch refractor, that all but the brightest are nearly at the limit of visibility with that instrument. Several other faint nebulæ, the positions of which were not noted, were observed during the search. In fact, this region seems to be filled with small, apparently unconnected nebulæ, large numbers of which would doubtless be revealed by long-exposure photographs.

The plates used with the Crossley reflector measure $3\frac{1}{4} \times 4\frac{1}{4}$ inches, giving a field of only about one degree.

Note on the Nebula N.G.C. 6535 (R.A. 17^h 59^m. N.P.D. 90° 18′). By W. H. Robinson.

Note on the Nebula N.G.C. 6535 *(R.A.* 17$^{\rm h}$ 59$^{\rm m}$. *N.P.D.* 90° 18′*).*
By W. H. Robinson.

(Communicated by the Radcliffe Observer.)

This object was picked up with the Barclay Equatorial on May 3, 14$^{\rm h}$, when it was fairly conspicuous and about 2′ in diameter. It was also carefully observed with powers 45, 100, and 180 on May 5, 13$^{\rm h}$, when "the nebula was rather bright near its centre, with several small stars on the preceding side. The diameter of the nebula was 90″ approximately."

Immediately after my first observation, I identified it in Dr. Dreyer's most useful work, "New General Catalogue of Nebulæ, &c.," and was surprised to find the following description in the column "Summary Description"—viz., "pF, vS," &c., or *pretty faint* and *very small*, &c.

The introduction of the above catalogue contains, p. 12, a progressive scale adopted in Dreyer's work, where *very small* corresponds to 10″ to 12″ diameter, and *pretty large* or *considerably large* would correspond with my estimations.

The nebula was discovered by Hind in 1852, who remarked that it was " *a nebulous object which does not occur in any of the Catalogues of Nebulæ hitherto consulted. . . . It is very small and rather faint, perhaps* 1′ *in diameter . . .*" (*Monthly Notices,* xii. 208).

Although Hind described the nebula as "*very small*," his qualifying note, "*perhaps* 1′ *in diameter*," would place the object with *pretty large* nebulæ on Dreyer's scale.

On looking up the other reference given by Dreyer—viz. Auwers 38—I found, *Königsberger Beob.* vol. xxxiv. p. 227, Auwers's heliometer observation gave 2′ as the diameter of this nebula. This agrees very closely with the Barclay equatorial observation on 1899 May 3.

I would suggest that the nebula be described as pL instead of vS.

Radcliffe Observatory, Oxford :
        1899 *June* 6.

Ephemerides of Two Situations in the Leonid Stream. By
G. Johnstone Stoney, M.A., D.Sc., F.R.S., and A. M. W.
Downing, M.A., D.Sc., F.R.S.

The *ortho-Leonids*, the dense part of the great procession, will probably be streaming across the Earth's orbit next November. The Earth will reach the node probably not far from the epoch 1899 November 15^d 18^h (see *Proceedings of the Royal Society*, vol. 64, p. 409). At that time, were it not for moonlight, an endlong photograph of the part of the stream which is near the Earth but outside the atmosphere might perhaps be secured by pointing the telescope along the tangent of the meteoric orbit, which would require it to be pointed towards a situation in the heavens some degrees distant from the radiant point. But as the moon will be nearly full, it seems hopeless to obtain this photograph.

Under these circumstances, and as Dr. Isaac Roberts expressed his willingness to make another attempt to photograph the *Leonids* while outside the Earth's atmosphere, the best course appeared to be to provide an ephemeris which will enable observations to be made on groups of nights upon which the Moon will not interfere, and which come near the date on which the Earth reaches the node. This is done in the subjoined ephemerides. The Earth is so situated on those dates that an actually tangential view of the stream cannot be obtained, and accordingly we had to be content with computing the ephemeris for situations in the stream where it makes a small angle with the line of sight. Two such situations were selected, one to be observed in the group of nights free from moonlight which come next before November 15, and the other to be observed in the group of dark nights following that date. The first of the selected stations is the perihelion of the osculating ellipse of the part of the stream which the Earth encountered in 1866, and the other is the point along the same ellipse of which the mean anomaly is 30°. The osculating ellipse was obtained by allowing for the perturbations since 1866, as calculated in a paper on the perturbations of the *Leonids* read before the Royal Society last March, and published in the *R. S. Proceedings*, vol. 64, p. 403.

The ephemerides have been computed both for the above mentioned points and for points along the ellipse close to them, in order that it may be possible for the observer to foresee the position in his field of view of the tangent to the meteoric orbit. It may be expected that the meteors, if they can be photographed at all, will present themselves as a dim streak,

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